

1.(Currently Amended) A method for determining an offset-reduced Hall voltage of a Hall sensor, comprising:

applying a first Hall sensor current (I) at first and second taps of the Hall sensor, and determining a first Hall voltage at third and fourth taps of the Hall sensor spatially displaced from the first and second taps,

applying a second Hall sensor current modified relative to the first Hall sensor current, and determining a second Hall voltage, and

determining the offset-reduced Hall voltage from the first and second Hall voltages,

wherein~~characterized in that~~

the application of the second Hall current is effected at the third and fourth taps ,

and wherein~~the~~ the offset-reduced Hall voltage is determined with a first linear arrangement of the first, second, third and fourth taps to determine an angular component of a magnetic field, and an additional Hall voltage is determined with a second linear arrangement of taps in an arrangement which is oriented at an angle relative to the first arrangement.

2.(Cancelled)

3.(Cancelled)

4.(Cancelled)

5.(Cancelled)

6.(Cancelled)

7. (Cancelled)

8.(Currently Amended)      An offset-reduced Hall sensor, comprising:

a first tap, a second tap, a third tap, a fourth tap and a fifth tap each configured and arranged to tap or apply voltages and/or currents, where the second and fifth taps are shunted together, and

a control device to apply a first Hall sensor current through the first tap and the second tap that is spatially displaced relative to the first tap, and sense a first Hall voltage between the third and fourth taps, where the first tap is central with respect to the remaining taps and the third tap is located between the first and second taps, and the fourth tap is located between the first and fifth taps,

where~~characterized in that~~

the control device has a switching device to apply a second Hall sensor current through the third and fourth taps and sense a second Hall voltage between the first and second taps.

9.(Cancelled)

10.(Cancelled)

11.(Previously Presented)      The hall sensor of claim 8, comprising a memory device that stores the first and second Hall voltages, and where the control device processes the first and second Hall voltages to provide an offset-compensated Hall voltage.

12.(Previously Presented) The hall sensor of claim 11, wherein the first, second, third, fourth and fifth taps are located in a plane spanned by the flow direction of the first Hall sensor current and of a magnetic field to be detected.

13.(Previously Presented) The hall sensor of claim 8, comprising:

a sixth tap, a seventh tap, an eighth tap and ninth tap where the sixth and ninth taps are shunted together, where the first tap is located between the seventh and eight taps, and the seventh tap is located between the first and sixth taps while the eight tap is located between the first and ninth taps, where a line formed by the first, sixth, seventh, eight and ninth taps is offset by an angle from a line formed by the first, second, third, fourth and fifth taps.

14. (Previously Presented) The hall sensor of claim 13, wherein

the second, fifth, sixth and ninth taps are each located a first distance from the first tap; and  
the third, fourth, seventh and eighth taps are each located a second distance from the first tap,  
where the second distance is greater than the first distance.

15.(Previously Presented) The hall sensor of claim 14, wherein

the control device determines voltage values associated with intermediate tap positions that do not include an actual physical tap.

16.(Previously Presented) The hall sensor of claim 11, wherein the first, second, third, fourth and fifth taps are configured and arranged in a vertical Hall sensor arrangement.